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ML Directorate celebrates 'Bring Your Child to Work Day'

by Katherine Gleason, AFRL Public Affairs

WRIGHT-PATTERSON AIR FORCE BASE, Ohio — From the beginning, it was easy to see that Apr. 24, Bring your Child to Work Day at the Materials and Manufacturing Directorate, was going to be no ordinary day.

The day started early, at 8:00 a.m., to give the children their first glimpse of what a regular workday is like. A steady stream of children (from toddlers through high school age) and their parents filed into the lobby and were presented with special nametags and balloons in a variety of colors. Next, it was off to the directorate Cafetorium.

The families were greeted with breakfast and a few moments to socialize. Throughout the room were placed a series of posters highlighting the different technical and focus areas of the directorate.

Attendees of ML's Bring your Child to Work Day feel the heat being emitted from a rod of titanium following extrusion.

By 9:00 a.m., it was time to get down to business. Dr. Charles Browning, ML Director, started off with a brief overview of the directorate. He was followed by Col. Tim Brotherton, ML Deputy Director, and Jim Solomon of ML's Survivability and Sensor Materials Division, who presented a 30-minute display of the many fun and exciting things you can do with science.

Solomon began by asking the children if they thought he looked like a scientist. According to the audience, his glasses and collared shirt gave him away. Then, Solomon asked if they thought Brotherton, dressed in his BDUs, looked like a scientist. The kids unanimously agreed that he did not, so, they dressed him up like one—with a long white lab coat, coke-bottle glasses, rubber gloves, a surgical mask and booties for his feet.

Then, Solomon informed the audience that, "for the next half-hour or so, we're all going to be scientists." They performed experiments to include a vacuum tube to demonstrate how a lack of air affects how objects fall; a liquid nitrogen-frozen banana used to hammer nails; and a popgun made from a soda bottle, baking soda and vinegar.

Following the science demonstrations, the children had the opportunity to participate in a series of tours, each showcasing a different aspect of the Materials and Manufacturing Directorate. One of the stops featured an extrusion—the forming of a small cylinder of titanium into a long, thin rod—to show how pieces of metal are turned into parts. The process literally concluded with a bang, as the sound of the titanium rod being squeezed out was similar to a rifle shot. The tour group shrieked with delight and was amazed to see how the metal had changed following the process.

A second tour stop was in the Nondestructive Evaluation Lab, where the children got to see an infrared camera and learned how scientists use vibrations to check for damage to engine parts. Additional stops included the scanning electron microscope, an optical communication system, a hydraulics demonstration and rapid prototyping.

This was the second year for this event. Brotherton remarked, "This is an excellent opportunity to educate, motivate and stimulate the next generation of Air Force scientists and engineers." @